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Notice of Allowability	Application No.	Applicant(s)	
	10/780,859	ENDO, HIRONORI	
	Examiner	Art Unit	
	Julian D. Huffman	2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment filed 9 June 2006.
2. ☒ The allowed claim(s) is/are 12-18, 20 and 21.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 10/370,070.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>11/18/04</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |

Julian D. Huffman
 Julian D. Huffman
 Art Unit 2853
 23 August 2006

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Daniel Williams on 23 August 2006.

The application has been amended as follows:

Claim 12, rewritten as follows:

A printing apparatus comprising:

an ejection head moving in a first direction, said ejection head having a plurality of nozzles provided along a second direction which is different from said first direction, said plurality of nozzles selectively ejecting ink droplets of a plurality of sizes to form dots on a printing medium; and

a controller for printing a first correction pattern and a second correction pattern, said first correction pattern and said second correction pattern enabling correction of a misalignment between a position at which dots are formed during a forward pass through which said head is moved and a position at which dots are formed during a return pass through which said head is moved,

said first correction pattern and said second correction pattern are made of dots arranged in said first direction and said second direction,

each dot that makes up said first correction pattern is a certain size,

the size of each dot that makes up said second correction pattern is different from the size of said dots that make up said first correction pattern,

a distance between the centers of neighboring dots arranged along said first direction of said first correction pattern and a distance between the centers of neighboring dots arranged along said first direction of said second correction pattern are limited to be the same distance, and

a distance between the centers of neighboring dots arranged along said second direction of said first correction pattern is different from a distance between the centers of neighboring dots arranged along said second direction of said second correction pattern.

Claim 17, rewritten as follows:

A printing apparatus comprising:

an ejection head moving in a first direction, said ejection head having a plurality of nozzles provided along a second direction which is different from said first direction, said plurality of nozzles selectively ejecting ink droplets of a plurality of sizes to form dots on a printing medium; and

a controller for printing a first correction pattern and a second correction pattern, said first correction pattern and said second correction pattern enabling correction of a misalignment between a position at which dots are formed during a forward pass through which said head is moved and a position at which dots are formed during a return pass through which said head is moved,

said first correction pattern and said second correction pattern are made of dots arranged in said first direction and said second direction,

each dot that makes up said first correction pattern is a certain size,

the size of each dot that makes up said second correction pattern is different from the size of said dots that make up said first correction pattern,

a distance between the centers of neighboring dots arranged along said first direction of said first correction pattern and a distance between the centers of neighboring dots arranged along said first direction of said second correction pattern are limited to be the same distance,

a distance between the centers of neighboring dots arranged along said second direction of said first correction pattern is different from a distance between the centers of neighboring dots arranged along said second direction of said second correction pattern,

said printing apparatus is capable of
receiving command information from a user based on said first correction pattern and said second correction pattern, and
correcting said misalignment based on the command information.

Claim 18, rewritten as follows:

A printing apparatus comprising:

an ejection head moving in a first direction, said ejection head having a plurality of nozzles provided along a second direction which is different from said first direction, said plurality of nozzles selectively ejecting ink droplets of a plurality of sizes to form dots on a printing medium; and

a controller for printing a first correction pattern and a second correction pattern, said first correction pattern and said second correction pattern enabling correction of a misalignment between a position at which dots are formed during a forward pass through which said head is moved and a position at which dots are formed during a return pass through which said head is moved,

said first correction pattern and said second correction pattern are made of dots arranged in said first direction and said second direction,

each dot that makes up said first correction pattern is a certain size,

the size of each dot that makes up said second correction pattern is different from the size of said dots that make up said first correction pattern,

a distance between the centers of neighboring dots arranged along said first direction of said first correction pattern and a distance between the centers of neighboring dots arranged along said first direction of said second correction pattern are limited to be the same distance,

a distance between the centers of neighboring dots arranged along said second direction of said first correction pattern is different from a distance between the centers of neighboring dots arranged along said second direction of said second correction pattern,

said first correction pattern and said second correction pattern have a plurality of sub-patterns,

each sub-pattern is made of dots arranged in said first direction and said second direction,

each said sub-pattern has forward-pass dots that are formed with a predetermined distance in said first direction therebetween during said forward pass and return-pass dots that are formed with a predetermined distance in said first direction therebetween during said return pass;

an amount of misalignment between a position at which the forward-pass dots are formed and a position at which the return-pass dots are formed is different for each sub-pattern,

said predetermined distance is at least twice the spacing in said second direction between the dots of said sub-pattern,

said printing apparatus further comprises a density detection member for detecting a density of said sub-patterns, and

said misalignment is corrected based on a result of the density detected by said density detection member.

Claim 20, rewritten as follows:

A computer system comprising:

a computer main unit; and

a printing apparatus that is connected to said computer main unit, said printing apparatus having an ejection head moving in a first direction, said ejection head having a plurality of nozzles provided along a second direction which is different from said first direction, said plurality of nozzles selectively ejecting ink droplets of a plurality of sizes to form dots on a printing medium; and

a controller for printing a first correction pattern and a second correction pattern, said first correction pattern and said second correction pattern enabling correction of a misalignment between a position at which dots are formed during a forward pass through which said head is moved and a position at which dots are formed during a return pass through which said head is moved,

said first correction pattern and said second correction pattern are made of dots arranged in said first direction and said second direction,

each dot that makes up said first correction pattern is a certain size,

the size of each dot that makes up said second correction pattern is different from the size of said dots that make up said first correction pattern,

a distance between the centers of neighboring dots arranged along said first direction of said first correction pattern and a distance between the centers of neighboring dots arranged along said first direction of said second correction pattern are limited to be the same distance, and

a distance between the centers of neighboring dots arranged along said second direction of said first correction pattern is different from a distance between the centers of neighboring dots arranged along said second direction of said second correction pattern.

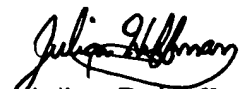
Claim 21, lines 4-5, replaced "nozzle" with "plurality of nozzles".

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Julian D. Huffman whose telephone number is (571) 272-2147. The examiner can normally be reached on 10:00a.m.-6:30p.m. Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Julian D. Huffman
Art Unit 2853
23 August 2006